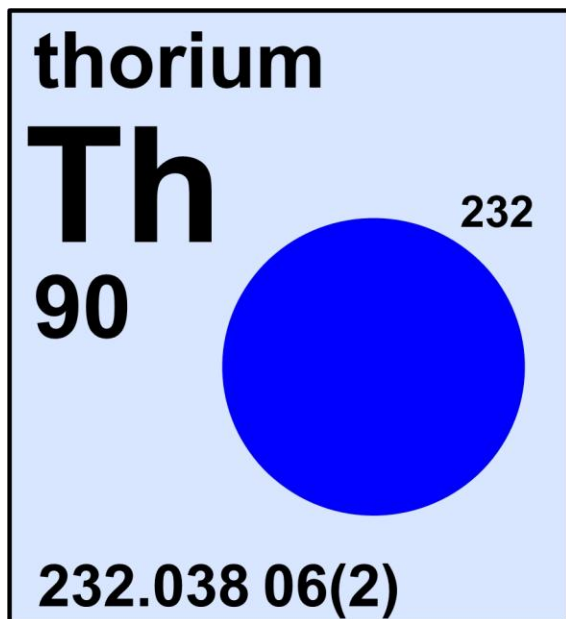


thorium

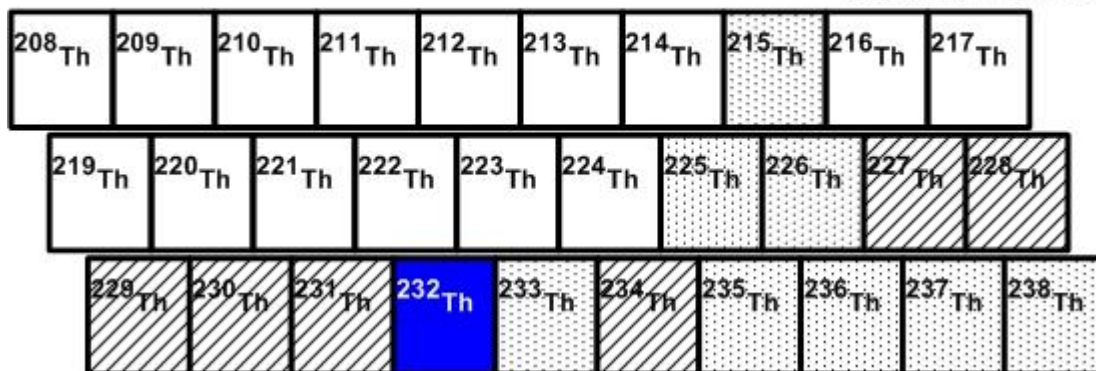


Stable isotope	Atomic mass*	Mole fraction
^{232}Th	232.038 0553	1.0000

* Atomic mass given in unified atomic mass units, u.

Half-life of radioactive isotope

Less than 1 second
Between 1 second and 1 hour
Greater than 1 hour



Important applications of stable and/or radioactive isotopes

Isotopes in geochronology

- 1) The decay of ^{232}Th to ^{208}Pb is used to date geological samples based on the accumulation of the stable daughter product ^{208}Pb . The half-lives of the isotopes between the parent ^{232}Th and stable endpoint ^{208}Pb all have much shorter half-lives than thorium. Therefore, the amount of ^{208}Pb that accumulates in a sample is determined primarily by the amount ^{232}Th parent present when the mineral was formed and the time that has elapsed since the mineral solidified.

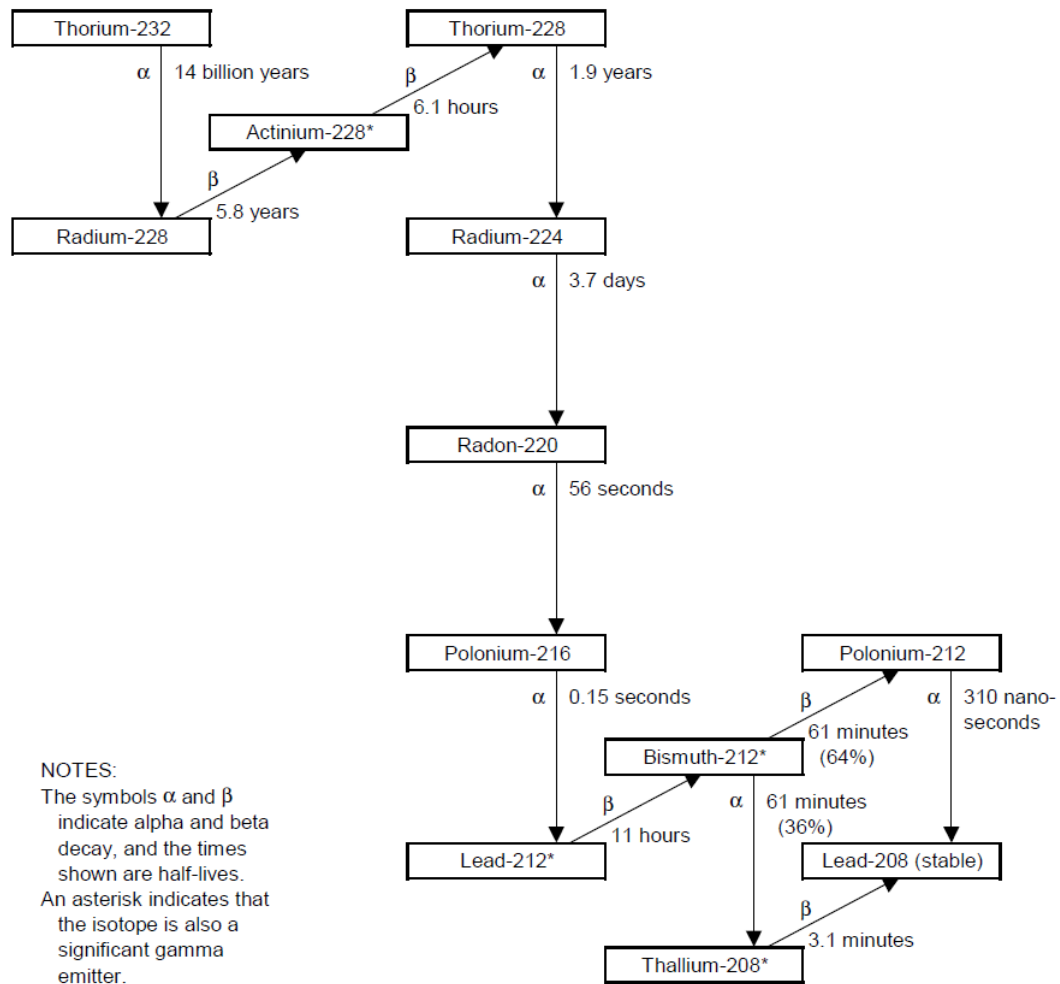


Figure 1: Thorium-232 Radioactive Decay Series.